AMENDMENTS TO THE CLAIMS:

Please amend claims 1-28 as indicated below. Please also add new claims 29-32. This listing of claims will replace all prior versions and listings of claims in the application. Deletions appear in ~~strikethrough font~~, and additions are underlined.

Complete listing of claims

1. (Currently Amended) A permselective asymmetric hollow fibre membrane for the separation of toxic mediators from blood, comprised of at least one hydrophobic polymer and at least one hydrophilic polymer, ~~characterized in that~~wherein said membrane allows passage of molecules having a molecular weight of up to 45 000 Daltons in presence of whole blood, and has a molecular weight exclusion limit in water of about 200,000 Daltons.

2. (Currently Amended) A membrane according to claim 1, ~~characterized in that~~ wherein said at least one hydrophilic polymer and said at least one hydrophobic polymer are present in the membrane as domains on the surface.

3. (Currently Amended) A membrane according to claim 1 ~~any of claims 1 or 2~~, ~~characterized in that~~ wherein said at least one hydrophobic polymer is present in an amount of 50-80 weight%, based on the weight of the membrane.

4. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-3~~, ~~characterized in that~~ wherein said at least one hydrophilic polymer is present in an amount of 20-50 weight%, based on the weight of the membrane.

5. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-4~~, ~~characterized in that~~ wherein said at least one hydrophobic polymer is chosen from the group consisting of polyarylethersulfone (PAES), polypropylene (PP), polysulfone

(PSU), polymethylmethacrylate (PMMA), polycarbonate (PC), polyacrylonitrile (PAN), polyamide (PA), ~~or~~ and polytetrafluorethylene (PTFE).

6. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-5~~, wherein ~~characterized in that~~ said at least one hydrophilic polymer is chosen from the group consisting of polyvinylpyrrolidone (PVP), polyethyleneglycol (PEG), polyvinylalcohol (PVA), and copolymer of polypropyleneoxide and polyethyleneoxide (PPO-PEO).

7. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-6~~, ~~characterized in that~~ wherein said membrane has at least a 3-layer asymmetric structure.

8. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-7~~, ~~characterized in that~~ wherein a separation layer is present in the inner most layer of the hollow fibre.

9. (Currently Amended) A membrane according to claim 8, ~~characterized in that~~ wherein the separation layer has a thickness of < 0.5 μm.

10. (Currently Amended) A membrane according to claim 8 ~~any of claims 8 or 9~~, ~~characterized in that~~ wherein the separation layer contains pore channels.

11. (Currently Amended) A membrane according to claim 8 ~~any of claims 1-10~~, ~~characterized in that~~ wherein the pore size in the separation layer is 15-60 nm, ~~preferably 20-40 nm~~.

12. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-11~~, ~~characterized in that~~ wherein the sieving coefficient for IL-6 in presence of whole blood is 0.9-1.0.

13. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-12~~, ~~characterized in that~~ wherein the sieving coefficient for albumin in presence of whole blood is below ~~0,05~~ 0.05.

14. (Currently Amended) A membrane according to claim 1 ~~any of claims 1-13~~, ~~characterized in that~~ wherein the openings of the pores on the outer surface are in the range of 0.5-3 μm and the number of said pores ~~are~~ is in the range of 10,000 to 150,000 pores/mm^2~~, preferably 20,000 to 100,000 pores/mm^2~~.

15. (Currently Amended) A membrane according to claim 14, ~~characterized in that~~ wherein said membrane has a four-layer asymmetric structure, and wherein ~~said~~ the fourth outer layer has the form of a sponge layer ~~having the outer surface according to claim 14~~wherein the openings of the pores on the outer surface of said fourth outer layer are in the range of 0.5-3 μm and the number of said pores is in the range of 10,000 to 150,000 pores/mm^2.

16. (Currently Amended) A process ~~Process~~ for the preparation of a membrane ~~according to~~as claimed in claim 1, ~~claims 1-15~~ by solvent phase inversion spinning, comprising: ~~the steps of~~

a) dissolving the at least one hydrophobic polymer and the at least one hydrophilic polymer in a solvent to form a polymer solution,

b) extruding the formed polymer solution through an outer ring slit of a nozzle with two concentric openings,

c) extruding a centre fluid through the inner opening of the nozzle, and

d) subsequently washing and ~~preferably~~ optionally drying the membrane,

wherein the polymer solution comprises 10-20 weight% hydrophobic polymer and 2-11 weight% hydrophilic polymer.

17. (Currently Amended) A process ~~Process~~ according to claim 16, wherein the centre fluid comprises 45-60 weight% of a precipitation medium chosen from the group of water, glycerol and other alcohols.

18. (Currently Amended) A process ~~Process~~ according to ~~any of~~ claims 16 ~~or 17~~, wherein the centre fluid comprises 40-55 weight% of solvent.

19. (Currently Amended) A process ~~Process~~ according to claim 16 ~~any of claims 16-18~~, wherein the polymer solution ~~emerges~~ emerging from the outer slit opening is, on the outside of the precipitating fibre, exposed to a humid steam/air mixture.

20. (Currently Amended) A process ~~Process~~ according to claim 19, wherein the temperature of the humid steam/air mixture is at least 15°C~~, preferably at least 30°C,~~ and not more than 75°C~~, preferably not more than 60°C~~.

21. (Currently Amended) A process ~~Process~~ according to claim 19 ~~any of claims 19 or 20~~, wherein the relative humidity in the humid steam/air mixture is between 60 and 100%.

22. (Currently Amended) A process ~~Process~~ according to claim 19 ~~any of claims 19-21~~, wherein the solvent content in the humid steam/air mixture is between ~~0,5~~0.5 and 5 weight% related to water content.

23. (Currently Amended) A process ~~Process~~ according to claim 16 ~~any of claims 16-22~~, wherein the polymer solution contains 0.5-7.5 % by weight of suitable additives.

24. (Currently Amended) A process ~~Process~~ according to claim 16 ~~any of claims 16-23~~, wherein the solvent is chosen from ~~the group comprising,~~ n-methylpyrrolidon (NMP), dimethylacetamid (DMAC), dimethylsulphoxide (DMSO), dimethylformamide (DMF), butyrolactone and mixtures of said solvents.

25. (Currently Amended) A process ~~Process~~ according to claim 16 ~~any of claims 16-24~~, wherein the temperature at the ~~spinning~~ nozzle and of the polymer solution and centre fluid, is between 30°C and 80°C.

26. (Currently Amended) ~~Use of a membrane according to any of claims 1-15 in~~ A method of performing hemofiltration of whole blood ~~for treatment of toxic mediator related diseases~~comprising filtering the blood with at least one membrane as claimed in claim 1.

27. (Currently Amended) ~~Use of a membrane according to any of claims 1-15 in~~ A method of performing hemodialysis of whole blood ~~for treatment of toxic mediator related diseases~~ comprising dialyzing the blood with at least one membrane as claimed in claim 1.

28. (Currently Amended) ~~Use of a membrane according to any of claims 1-15 in~~ A method of performing hemodiafiltration of whole blood ~~for treatment of toxic mediator related diseases~~ comprising

filtering the blood with at least one membrane as claimed in claim 1; and

dialyzing the blood with at least one membrane as claimed in claim 1.

29. (New) A membrane according to claim 11, wherein the pore size in the separation layer is 20-40 nm.

30. (New) A membrane according to claim 14, wherein the number of pores on the outer surface of the membrane is in the range of 20,000 to 100,000 pores/mm^2.

31. (New) A membrane according to claim 15, wherein the number of pores on the outer surface of said fourth outer layer is in the range of 20,000 to 100,000 pores/mm^2.

32. (New) A process according to claim 20, wherein the temperature of the humid steam/air mixture is at least 30°C and not more than 60°C.